



COLORADO SPRINGS,
COLORADO

JANUARY 1989

PIKES PEAK RADIO AMATEUR ASSOCIATION, INC.

P.O. Box 16521
Colorado Springs, CO 80935

FIRST CLASS MAIL



Ø BEAT



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Board Member	*Max Stafford KDØEL P.O. Box 35 Palmer Lake 80133	488-9289

* denotes the first year of a two-year term.

ZERO BEAT is published monthly in the interest of the members of the Pikes Peak Radio Amateur Association, Inc., P.O. Box 16521, Colorado Springs, Colorado 80935. Cost is 50¢ per month for non-members or a \$4.00 per year subscription. Permission is given to reprint articles or excerpts provided credit is given. Deadline for submission of articles is the 21st of the month. Classifieds accepted anytime.

The Pikes Peak Radio Amateur Association meets on the second Wednesday of each month at the Hewlett-Packard facility, at the intersection of Lexington and Union, at 7:30 p.m. All amateurs and interested parties are invited to attend.

Editor: Keith Goobie NYØT, 5335 Coneflower Ln., Colorado Springs, CO 80917 637-1525

Tower Ordinance Update

This is a report regarding the negotiations between the amateur community and the county land use department.

Due to the weather the December meeting of the PPRAA was canceled and we were not able to update you regarding how the negotiations have been progressing. This was unfortunate because we have been seeking input from the amateur community.

Currently, to summarize where we are, we have negotiated the following:

A. Towers would be permitted to be erected up to 60 feet with no special use permit required.

B. Antennas and towers attached to the house will be permitted up to 45 feet as an accessory use, with no permit required.

C. In certain areas of the county zoned A-35, towers would be permitted up to 100 feet with no special use permit required.

D. We have taken out the term "Amateur Radio Facility" and replaced this term with "Private Tower". Thus C.B. antennas, T.V. antennas, satellite dishes, or any self supporting tower that exceeds two times the zoned height

would have to come under the same required rules that amateurs would have to abide by.

Of concern, still to be negotiated are two major points:

1. The rule concerning the so-called 1/2 mile rule. We have currently got the county attorney to agree that a person could put up a tower within 1/2 mile of a special use tower that exceeds two times the height of the zone. The person would not have to apply for a special use permit if the person stays at the zone height for the zone, or if the person attached the tower or antenna to the house he could go up to 1 1/2 times the height for the zone, usually 45 feet.

We are not entirely satisfied with this, but it is much better than originally written.

2. The county attorney would not budge on the so-called "grandfather" clause. This has met a stalemate and we hope to bring it up again in the next meeting at 3:00 p.m. on Jan. 9th. As written, any tower now approved and constructed is unaffected. Any tower that is now approved but NOT constructed would lose its approval.

This brings up what you can do:

A. If you would like a copy of the current, and re-negotiated versions of the land use document, please give the county land use department a call at 520-6300 and ask for the current version under consideration after the two Amateur Radio Facility Committee meetings. This would really help create the impression at the land use department that we are watching this issue VERY closely.

B. If you have any questions, or wish to provide input to the committee, don't hesitate to call the four committee members *Cont page 11*

"THE VIEW FROM THE PEAK"

by George Hinds, N8CIX

JUSTICE PREVAILS! AFTER 7 MONTHS, KENWOOD COUGHS UP AND BUYS BACK DUAL-BAND TM-721A. Or: A Lesson In Consumerism -- Don't Get Mad -- Get Even -- Get A Refund!

If you've been following the saga of how I (and heaven knows how many others) found that the Kenwood dual-bander TM721A, contrary to the advertised claim that it "provides best visibility in direct sunlight..." in fact can be difficult, even impossible, to see in direct sunlight, you know it took almost 8 months of written complaints: to Kenwood, to the "QST" advertising manager (an exercise in futility), to the selling dealer, to a Better Business Bureau, and finally to the California State Director of Consumer Affairs who turned the matter over to the Los Angeles District Attorney before I received a response from Kenwood. It was then I received a brief note stating in part: "Our engineers are currently looking into the feasibility (sic) of changing the LCD display on this radio to one that is more visible..." and "We trust that if our engineering department is able to develop an alternative display that it will be made available to present owners." I sent the D.A. a copy of Kenwood's letter, pointing out that such letter was admission that my complaint was valid and again requested a refund of the purchase price; a copy was sent to Kenwood, too. Within a few days, Kenwood called - they were going to "buy back" from me the TM-721A through the dealer from whom it was purchased. Lo and behold, they've got the rig back, I've got my money back - and I rushed out to buy another dual-bander - but not, you can bet, a Kenwood.

WHY, OH WHY DIDN'T I SAVE MY BOY SCOUT FIELD MANUAL FROM 1936? Becoming involved with a mountain search and rescue team has brought me to a realization that topographical map reading skills acquired in my Boy Scout days have, after an interval of only 50 years, largely left me. While those of us from the Mountain ARC who assist with communications for the county search and rescue are "Seniors" and thus refrain from too-strenuous climbing at these high altitudes, etc., it does help us to know the fundamentals of topo map-reading as we look for a high spot to park the 4x4 communications van and then handle reports to and from the search teams in the field. In my flying days, I met several flying farmers with Piper Cubs who always flew "low and slow" for a map they relied on one from

Texaco or Shell. Well, that won't work when you're flying IFR, nor will it work in mountain search and rescue. So, to make a point, dear reader: If you're planning on some back roads adventure in the mountains, be sure you have a very good map and a compass - and that you know how to read both!

NEW "NO CODE" AMATEUR LICENSE CLASS: In this column last month I offered some reflections on the U.S. following Canada and many nations around the world by establishing a "no-code" class of amateur license so as to create an increase in the number of amateur radio operators. As you should know, amateurs are steadily declining in numbers despite recent attempts to encourage growth. Remember: international radio regulations still require CW knowledge for operation above 30 MHz, so there should be no concern by HP'ers that they would be overwhelmed by a new class of "no-code" licensees on 10 thru 160. With no-code, applicants and other amateurs who wish to use CW are free to do so as provided on VHF-UHF; and to upgrade as desired. Neither is the FCC seeking to limit the growth of amateur radio. In fact, the commission has said on more than one occasion words to the effect that unwarranted requirements restricting the entry of applicants to the amateur radio service should be eliminated; for example, the drying-up of applicants is seriously limiting the capability of the service to perform in the public interest, convenience and necessity. A commission spokesman once said before an ARRL convention that since hams reject "no-code" licensing (to populate the 220 MHz band), the commission must look to reconsider allocating the 220 MHz band to land mobile services. Now that's been done - we've lost part of 220. Old-timers can remember that's the same method that brought about loss of 27 MHz to hams - lack of use! What band will be next? Perhaps an example many of us can relate to is the decreasing traffic on our repeaters. More and more we hear less and less. To make it even worse, more and more we hear complaints from amateurs who, when confronted with a highway or traffic emergency and calling for assistance, have their calls go unanswered. As you travel cross-country today, the chance of striking up a casual contact is less and less, as is the chance of getting a response for a priority or emergency call. Our ability to serve is down from what it was a few years ago. No-code licensing has not caused significant problems in other nations - it has increased the number of amateurs as witness Japan: more than 4 times the number of amateurs as the U.S. but less than half our population! My purpose in writing is to provoke thought among the readers. Perhaps a way to put one's brain in gear on this issue is to pretend that there is

Today no amateur radio service - it is only now to be created. Cast aside emotion, fear, ideas and modes of years gone by. On the verge of entering the 21st century, in the age of digital electronics, satellites, packet, RTTY, AMTOR, ACSSB, and youngsters raised on computers and high-tech gadgets, would you mandate that before being licensed to use packet, satellite and VHF-UHF, an applicant for this new radio service must be proficient in telegraphy? I think not, if one is ruled by reason and logic. In closing, let me say that there are those who are now planning to file with the FCC to create a no-code license. To do so, they are creating a new group - the National Amateur Radio Association. Personally, while I appreciate their stated objective to increase the growth of the service, and I am not opposed to no-code that above 30 MHz that requires testing in theory, regulations and good operating practices, I do not support further fragmentation of this service by going outside of the ARRL; we are now so numerically small in number today (and getting smaller daily) that we are suffering from lack of strength in fighting restrictive antenna rules, in fighting to hold our allocated spectrum space, and in performing public service as contemplated with the creation of this amateur radio service. Amateurs will not gain strength, or even maintain our current position, by further division in our ranks.

.73. George Hinds, N8CIX



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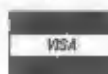
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PRODUCT REVIEW

Palomar Tuner-Tuner PT-340

by Jim Sorrells WA9ABB

The "Tuner-Tuner" is a device that lets you adjust your antenna tuner without transmitting a signal over the air. This is a nice way to tune up on any frequency without causing QRM. It also tends to save wear and tear on your finals, be they solid-state or empty-state (vacuum tubes).

The PT-340 is simple to connect and operate. Just dial in the desired operating frequency on your rig. Turn the Tuner-Tuner on and then adjust your antenna tuner for the lowest receiver noise level. The SWR will be 1:1 every time.

The only problem noticed in nearly one year's use is that it is very easy to forget to turn the darn thing off before you key your rig up. This results in no permanent damage as it is protected by a fast blow 1/16 amp fuse. The fuse is a nuisance to replace since the cover must be removed to get to it. They are also expensive and hard to find locally. Perhaps in later versions, Palomar will incorporate pin-diode switching or at least put the fuse holder on the back of the case.

The Tuner-Tuner is actually an antenna noise bridge. Palomar and a few other companies make adjustable noise bridges which are very useful for checking and adjusting antennas for resonance and proper impedance match. You could use one of the adjustable noise bridges to adjust your antenna tuner, but would have to come up with some switching system and set the noise bridge for 50 ohm impedance. The Tuner-Tuner is fixed at 50 ohms and has the switching incorporated in it.

All-in-all, the Tuner-Tuner has been a useful addition to my shack. Except for an occasional fuse it has been very reliable. On a scale of 1 to 10, I rate it 8.5. If you have any questions, give me a call.

73's

Jim WA9ABB

REPORT ON THE WOODPECKER SIGNAL

by James T. Beckham
FCC Field Operations Bureau

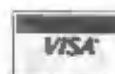
The FCC collected data concerning the "Woodpecker" radio transmissions during a one week period beginning August 14, 1988. All thirteen FCC monitoring stations participated. Over 400 observations of the "Woodpecker" signal were recorded. Our findings were:

1. The pulse rate remains at 11 to 11.5 pulses per second.
2. The pulse width remains at 4 milliseconds.
3. The lowest confirmed frequency was 7 MHZ.
4. The lowest confirmed bandwidth was 20 KHZ and the highest 800 KHZ.
5. The most occupied bands appeared to be 10.5 to 11.0, 12.2 to 13.0, 16.0 to 17.0 MHZ.
6. The least occupied bands appeared to be 9.7 to 10.5, 11.0 to 12.2, 13.0 to 15.0 MHZ.
7. The bandwidth mean was 150 KHZ, the median 75 KHZ, and with a standard deviation of 207 KHZ.
8. The air time of a signal was, as a minimum, 7.7 minutes for the mean, 3.0 minutes for the median and with a standard deviation of 12.3 minutes.
9. All of the transmissions originated from a single location that we fixed at coordinates 51 degrees 24 minutes North by 137 degrees 42 minutes East near the city of Komsomolsk in the USSR.

The observations are essentially in agreement with the findings of monitoring we conducted February 23 through March 1, 1986. This appears to be the permanent pattern of operation for the "Woodpecker".

Questions or comments should be directed to James Beckham at (202) 632-6977.

Taken from the ANARC Newsletter (10/88)



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OSCAR 13 NEW OPERATING SCHEDULE

For the first of January 1989 AMSAT engineers plan to reorient OSCAR 13 (AO-13) back to 180 degrees longitude and zero degree latitude. This gives optimum "squint angle" (direction of the satellite antennas from your view) around apogee, which results in a new schedule, mainly concerning mode-L operation.

The following transponder schedule will be in use from January 6 until March 15:

Mode-B from MA 3 until MA 100
Mode-JL from MA 100 until MA 150
Mode-B from MA 150 until MA 240
OFF from MA 240 until MA 3

AO-13 will again be reoriented in early March 1989, and there will be an update of operating schedules during that period to conserve batteries and maintain the energy system in a safe condition.

CW - Do We Still Need It?

CW! Morse Code! Dits and Dahs! The Code! Different names, different emotions. One way to get a lively conversation going with some Hams is to mention doing away with the code. Or not doing away with it. I believe we should keep the code as part of the basic requirements for any and all licenses in the amateur service. Unfortunately a lot of people who feel this way undermine the argument in favour of CW by saying, "It keeps the ruff raff out." Well, maybe. But I doubt it. I suppose it does help, and there is one thing in it's favour, but I suggest that there are much better reasons for requiring the code. After all, the technical requirements for the written test are certainly no easy thing for most people. The harder you make the job, the fewer people that there will be who will tackle it. My experience has been that your problem people are usually (but not always!) lazy.

However, the real reasons for keeping the requirement for CW is really quite basic. It is a definite part of Ham Radio. It is used on our repeaters to identify them, a substantial percentage of Hams use it as their primary mode of operation, it can be used in an emergency with simple equipment, it is better for message handling than voice, it is the only mode suitable for EME operations. We are experimenters and it is in many cases the best mode for experiments. It is clearly not an outdated obsolete mode. It is still used in the military, by civilian agencies in the government and commercially. Doesn't look obsolete to me.

Look at the material covered in the written test. EME, digital, propagation, HF, VHF, UHF, microwaves, circuitry, solid state devices, antennas, feedlines, interference, and on and on. Why? Because these are all part of the Amateur Radio Service and you need to be aware, or even proficient in them. The old "I'm not interested, so I shouldn't have to learn it" line doesn't fit in here. I've met a couple of people in my time who were former code operators in the military, you know the type. 45 words per minute. They were kind of interested in Ham Radio, but didn't want to have to learn all that theory stuff. Should we ask the FCC to drop the written test to accommodate them? I have taught Novice classes and some of my former students went on to become dedicated CW operators. They will tell you that they had no idea that CW could be so interesting and so much fun before they learned it. Those who

criticize the code frequently do not know what they are talking about because they do not know the code. It's like criticizing music when you have never heard any before. The 5 WPM requirement was never even meant as an introduction, but a start towards an introduction, the Novice ticket allowed you to improve your code speed on the air, a lot more fun than listening to code tapes by the hour. 13 WPM is an introduction of sorts, but to those that think it's too much, there are people who run 40 to 50 WPM. That's good. So why do they think 13 WPM, or even 20 WPM is such a big deal? Well, for some of us it is, I had to really sweat over it, but I was a strong supporter of the code requirement when I was working for my Novice. While I have not been able to work much CW in the last few years, or even much HF for all that, I am reasonably sure that I could pass the 13 WPM test with no problem, but would be hard pressed on 20. It would certainly not take me a lot of brushing up to handle the 20 WPM again.

Once you accept the argument that a lot of people never use the code, then you could logically argue that a lot of people never use EME, or digital techniques, or some other subject that is on the test and really have nothing left to examine the new Ham for at all.

Frank N0PS

FLASH

ARMENIAN EARTHQUAKE

The USSR has designated three frequencies for handling emergency health and welfare traffic related to the recent earthquake catastrophe in Armenia. The frequencies are 3.649, 7.040, and 14.173. **All amateurs are asked to avoid these frequencies.** Updating bulletins are being sent from WIAW as news is received at HQ, and the Field Service Department is monitoring the designated emergency frequencies.

SOURCE: ARRL Letter

DIAMOND JUBILEE AWARD

by W1JL

The ARRL is sponsoring a special award/certificate to commemorate its 75th anniversary. **THIS AWARD IS AVAILABLE TO NON-MEMBERS AND MEMBERS ALIKE!** The award is issued for radio contact achievement in any of the following three categories:

Work 75 US Novice Stations (or Technicians below 30 MHz) with exchanges of more than RST/QTH. These contacts will provide meaningful contacts to assist Novices in improving their operating skills. Novices/Techs work anyone to obtain award.

Work 75 different DXCC countries on either the 18 or 24 MHz bands. Each country counts only once, regardless of band. Since 18 MHz will not be available until mid-89, most of the contacts will be on 24 MHz.

Work 75 ARRL/CRRL sections. This will be the toughest, since there are only 76 sections.

The award may be endorsed in any of the remaining two categories not achieved on the initial application. Postage and handling for the initial award is \$5.00, and \$1.00 for endorsements. No QSL cards are required; certification of log authenticity is all that is required. Qualification period is the calendar year/decade 1989 UTC.

IF YOU WOULD LIKE AN APPLICATION FOR THIS AWARD, DROP AN SASE TO THE TRIVIA ADDRESS.

This should be a sharp piece of "wallpaper", and one that is not that difficult to obtain. **GOOD HUNTING AND BEST OF DX IN 1989!**

TRIVIA CORNER

The winner of last month's Trivia was Tom Cox, WD0GVH, with the correct answer of "CQ Magazine and Zero Bias". Tom will receive a free breakfast at the Village Inn.

This month, the question is: When is not a country a country?? What qualifies it as a country?

Remember to send all entries to: **TRIVIA, 7460 Tans Drive, Colorado Springs, CO. 80920.**

MEETINGS...

Note: No general minutes as December meeting cancelled and not rescheduled

Board meeting December 19, 1988:

The board met at the QTH of Rick, WB7THT. Present: Ron NKOP, Al N0CMW, Keith NY0T, Bud N0DDF & Rick WB7THT.

There will be no reschedule of December meeting.

We discussed changing the way we pay our dues.

Starting January 1st all dues will be for one year from date of joining the club. This will make it easier on bookkeeping and keep a cash flow coming in.

Swapfest will be Saturday May 20th at Rustic Hills Mall same as last year. Grand prize will be an Icom 735. There will be no VE exams at the swapfest. Tables will be handled by Al N0CMW. Price will be known after he contracts for tables.

Board meetings will stay as usual no change of date.

OEM parts will be on a monthly billing and will be dropped if not paid each month.

Tower ordinance committee needs your inputs in writing. January will be homebrew night prizes 20, 10, 5 dollars.

Next board meeting at QTH of Al N0CMW. Next meeting January 11, at Hewlett Packard Briargate facility.

Submitted by Al N0CMW, Secretary.

JANUARY CLUB MEETING

January meeting will be Homebrew nite. (No, not the liquid kind!)

Cash prizes will be awarded to the best three projects as determined by a majority vote of the members present.

Lets prove to the newcomers to ham radio that home made projects are still possible...and FUN!

See you at the meeting. Wednesday, January 11th at 1930 Local Time.



DITS & BITS

ITEMS FOR SALE

Kenwood TR751A 2mtr all mode transceiver
\$500.00

YEASU 726R 2 and 6mtr all mode transceiver
with CW filter. \$750.00

Mirage D1010 430-450mhz all mode 100 watt
amplifier \$225.00

Kenwood TR9500 430-450mhz all mode 10
watt mobile transceiver \$350.00

Heath SB200 80 thru 10 meter 1200 watt
amplifier \$300.00

Contact: Jim Smith W4VAB 384-7541

FOR SALE

Yesu PR101 Receiver
Yesu PL101 Transmitter
Matching Speaker
Shure 444 Microphone
Headphones
CW Key
Hygain 18AVT/WBA antenna
65 Ft RG-8 Coax Cable

Package \$500.00

Contact: John Palmer @ 578-1127

FOR SALE

Heath 2240 Digital LC Bridge \$185.00
Regency Touch M-100 Scanner \$100.00
CDE Ham IV Control Box \$50.00

Contact: Ron NK8P 593-8352

**JANUARY IS TIME TO RENEW YOUR
MEMBERSHIP!!**

FOR SALE CONTINUED

ALUMA crank-up and fold-over aluminum 50
foot tower with manual.

Heavy duty TV rotor with cables, manual, and
shack operated control box included.

Tower alone cost \$1,000 new.

Asking \$600.00 OBO.

Dick W00OK 591-8565

Can be seen 15 to 21 January or 5 to 12
February 1989.

FOR SALE OR TRADE:

Yesu FT-726R all mode 144 and 432MHZ
Transceiver set-up for OSCAR.

Sell or Trade for Kenwood TS-811 or ICOM
475 Transceivers.

Contact Al N8CMW at 473-1668.

WANTED

Bird 2500C slug for Model 43 wattmeter.
Have 1000C slug to sell or trade.

I need an 8930 tube new or used/good. Have
other transmitting tubes to trade or will pay
reasonable cash price.

1296MHZ linear transverter needed (such as
SSB Electronics Model LT23S or similar).

Contact Ron NK8P at 593-8352

AGOX ELECTED TO SECOND TERM

Marshall Quiat, AGOX, has been elected to his
second term as Rocky Mountain Division Direc-
tor. He beat Laurence A. Eichel, K2NA, 1466 to
621. Marshall served as Vice Director from 1982-
86. He is past president of the Denver Radio
Club and current chairman of the ARRL Legal
Strategy Committee. He is also chairman of the
ARRL Membership Committee.

Vice director will be filled by William Shef-
field, KQ0J. Bill was the Section Manager for
the past 6 years.

AMATEUR RADIO LICENSE EXAMINATIONS

WHEN: Sat, 18 Feb 89 at 9:00 AM
WHERE: First United Methodist Church
420 North Nevada Avenue
Colorado Springs, CO
WALKINS: Allowed
TALK-IN: 146.37/97

NEEDED

1. Original FCC license, if any
2. A copy of your FCC license, if any
3. Two forms of positive identification (driver's license, birth certificate, passport or library card)
4. \$4.55 check or M.O. payable to ARRL/VEC
5. Completed FCC form 610
6. If physically handicapped, a physicians certificate describing the nature of the disability. Arrangements should be made prior to testing

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For more information contact:
Max Stafford 488-9289

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STOLEN AMATEUR RADIO

KENWOOD TS-930S Serial #4090229

Radio had AT-930 Internal antenna tuner installed.

Kenwood MC-60 Microphone #3123
Kenwood SP-930 Speaker

None of the Manuals were stolen. Therefore they will be "missing". The power cord for the transceiver was also not taken.

If you have information on this equipment call:
Boulder County Sheriff 441-3620

Case #588-14711 or call WB0EUD Greg at
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FUN WEEK END PROJECTS

BY KD0SO

You will remember from last month I told you that I would look at some easy to do, fun weekend projects. I also commented that I would like to have some input for this next series of articles. If you had such an idea please call me at 591-2703. Of course most of you know I attend the breakfast at the Village Inn. So, you can also let me know your desires there too. Well it didn't take long, before I got the first challenge. Al NOCMW, came up to me and asked an all too familiar question. As some of you may know, I perform Hardware Maintenance on computer systems for a living and I see this a lot. Question: What is pin No.21 do on an RS 232C connection. Well let me answer your question first Al and then we will look at what it takes to wire up an RS 232C connector, so you can get that print copy from packet, or what ever. Pin No.21 is "Signal Quality Detector". EIA circuit "CG" This circuit, is usually sent from the DCE to DTE. There I go again, using those Mnemonics and I haven't explained myself.

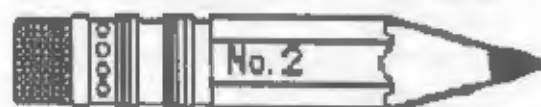
So lets begin at the beginning ok? In order to understand some of what I'm going to say you must first get an increase in you vocabulary. Perhaps it is easier to digest by defining those "BUZZWORDS". EIA = Electronic Industry Association. They have set a standard in the industry by which all companies go, so as to get an acceptable ability for various interfaces. Interfaces = A device or series of devices, (cables, connectors etc.) by which a piece of equipment, or (Peripheral), may be hooked to another device, ie; a computer. RS 232C is a set of guide lines specified by the EIA, to permit communications devices, to be hooked up, in a computer environment. DTE = Data Terminal Equipment. A device or machine that originates and or receives digital data, such as a computer. DCE = Data Communications Equipment. A device or machine that acts as a terminal, or terminates digital data signals, ie; telephone modem, printer, Packet terminal etc. Now that we have digested some of the buzzwords, lets look at what the standards definitions are.

1. Mechanical characteristics of the interface
2. Electrical signals within the interface.
3. Functions of the signals themselves
4. Secondary Functions for special applications.

Some of you may already know that the Amateur community, is not using the last function, #4. But, I will define these for you so you can have those questions answered. It's nice to know but, not required data.

connector." A little truth here. First of all EIA standards do not specify a DB25 pin connector as standard, it just became the popular thing to do. I'm not mistaken to much, we can credit ole Mother Blue for this one. (IBM)

PART 2 OF THIS ARTICLE WILL APPEAR IN NEXT MONTHS NEWSLETTER



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who represent the amateur community. They are:
Hal Hugeson W0MXY IL 471-0230 O. 540 7310
Malcom Beaton K2YS IL 488-2071
Lewisa Libby K2BO IL 593-9861 O. 598-1212
Pete Lakow H0LA IL 495-4829

Since the committee members represent you, let your opinions and comments be known now, not later when the negotiations are completed. Please consider making your comments known in writing to the committee members and the planning commission.

There are several dates that you should know about, the committee will have a final meeting at 3:00 p.m. on the 5th floor of the county office building at 27 East Vermijo, on January 9th.

The second date is the County Planning Commission on January 17th. **WE MUST HAVE A BIG AMATEUR TURNOUT FOR THIS MEETING. IF YOU CAN ATTEND PLEASE COME TO SUPPORT THE AMENDED DOCUMENT.**

Even though we have negotiated with the land use department, we will still have to get the amended document passed by the County Planning Commission, and then the County Commissioners. We will have to get the Amateur community to be in attendance for both of these meetings in **LARGE** numbers.

Of important note...only one homeowner's representative out of the four that have been asked to serve has come to the committee meetings. The four amateur representatives have been there for both meetings. We found it interesting that in the effort to protect homeowners, there has not been a lot of interest on the part of the homeowners associations.

If you are a member of your homeowners association, please write the County Planning Commission telling them that you support the amended version proposed by the Amateur Radio Facility Committee, not expressing the fact that you are an amateur, but write as a homeowner only. This will help substantiate the fact that we are not only amateurs, but homeowners also.

Remember, the committee members stand ready to answer your questions and to explain what has transpired. Please call one of them if you have a question before the issue comes up to the Planning Commission, because we need to present a united front on January 17th at the Planning Commission hearing. The committee members have spent many hours literally re-writing the first document, negotiating in a tense environment, and representing your interests as effectively as possible.

The committee will be available at the next meeting of the PPRAA to answer questions, gather input, and discuss the proposed amended document.

TREASURER'S REPORT

AS OF 12/25/88

Expenses for December 1988

(over \$50.00):

\$259.00	Club Liability Insurance
62.50	Raffle License
52.19	1989 Callbooks
138.45	Zero Beat Printing

Balance as of 12/25/88 \$1,041.18

Submitted by Ron NK2P, Club Treas.

PRODUCT REVIEW

Heathkit Discone Antenna HA-2513

The HA-2513 is a wideband discone antenna that covers 25 to 1300 mhz on receive. It may also be used on transmit in the 6M,2M,70cm,33cm,23cm and 900mhz amateur bands. It will handle up to 200 watts on transmit. Heath supplies 49 feet of RG-58/U coaxial cable with the antenna. The cable is Japanese made, as is the antenna. The cable loss is undoubtedly quite high above 144 mhz. The antenna is made of good quality materials and quite sturdy. It is 67 inches tall and weighs 2.2 lbs. The antenna is basically a unity gain device. It works well as a scanner antenna, that can also be used in a pinch for transmitting purposes.

This same antenna is sold by several other companies under their own brand names. I have seen it sold as the Diamond D-130. Radio Shack also sells a version for about \$20 less than the Heath or Diamond antenna, but does not include coaxial feedline. The Radio Shack version is probably the best buy. You can then opt for a better quality feed line.

I have used the HA-2513 as a scanner antenna since last May. It has held up well and given no problems. It performs noticeably poorer on 2M than my ringo ranger. It is a reasonable compromise for someone who wants to work more than one vhf/uhf band, but has limited space for antennas. With its wide-band coverage, it might also be useful for emergency communications.

Jim W4VAB

MILEY'S RADIO

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2/5/89	Littlefield, TX
2/24, 25, 26	Kearney, NE
3/17, 18, 19	Midland, TX
4/8, 9	Mooreland, OK
4/28, 29, 30	Bean Feed, Las Cruces, NM
5/6, 7	Sierra Vista, AZ
5/20	Colorado Springs, CO
6/3, 4	Loveland, CO

Used Rigs:

Kenwood TS 1805 \$425.
Kenwood TV 502 2 meter transverter for TS 520 and 820 \$125.
Kenwood VFO 820 \$125.
Kenwood AT 230 tuner \$150.
Kenwood TS 520S 80-10 meter excellent shape \$425.
Yaesu FV 901DM Scanning VFO w/Memory for 901/101ZD \$150.
Yaesu FT901DM with FM - non WARC \$475.
Yaesu SP901P Speaker/Patch \$50.
Yaesu FT101ZD non WARC \$475.
Yaesu FT101ZD with FM and WARC \$525.
Johnson kilowatt Matchbox with coupler and bridge \$150.
Uniden HR2510 - modified \$200.
Kenwood TM2550 \$370.
Kenwood TH21AT \$125.
Kenwood TH41AT with tone/HD battery and charger \$150.
Kenwood 7950 \$325.
Icom 02AT - modified and nice \$225.
Yaesu FT720B 70 cm all mode \$325.
Yaesu FT620B 6 meter SSB \$295.
Lots more used and consignment equipment.

73's — Jess

1/89

Membership Application

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PPRAA is not associated with the Pikes Peak FM Association.